ABSTRACT OF THE DISCLOSURE

When transmission rate information and required quality information for each user are known, each of the K units of multipliers (where K is a natural number and represents the number of users) multiplies the transmission rate information and the required quality information for each user. A sorting circuit estimates the power of the incoming signal based on the value output by the multipliers, determines the rank of the users based on the estimated power between users, and sends the information on the rank of the users to the first stage. Interference cancellation is then sequentially executed from the first stage to the final stage based on the rank information.